REMARKS/ARGUMENTS

The final office action mailed on November 8, 2010, has been reviewed and carefully considered. Reconsideration is respectfully requested.

Amendments to the Claims

Claims 1-4, 6-7 and 9-10 were pending in the present application prior to this amendment. Claims 1-4, 6-7 and 9-10 are now pending in the present application; among them, claim 1 is an independent claim. Claim 1 has been amended. No new matter has been added.

Claim Rejections - 35 U.S.C. §112

In the office action (page 2), claims 1-4, 6-7 and 9-10 stand rejected under 35 U.S.C. §112, ¶1 as failing to comply with the written description requirement. In response, the applicants have amended claim 1 as suggested by the examiner. Therefore, withdrawal of the above aforementioned 35 U.S.C. §112, ¶1 rejection to claims 1-4, 6-7 and 9-10 are respectfully requested

Claim Rejections - 35 U.S.C. §103

In the office action (page 4), claims 1-4, 6-7 and 9-10 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 5,937,332 (Karabinis) in view of U.S. Patent No. 6,198,460 (Brankovic) and U.S. Publication No. 2002/0118138 (Lindenmeier).

The applicants have amended claim 1 to better clarify the presently claimed invention.

The present invention relates to a mobile station for being able to receive **only a same downlink satellite signal from each of dual downlink transmitting antennas** before entering and after leaving a shadow area, where the downlink satellite signal cannot be directly transmitted from the dual downlink transmitting antennas to the mobile station when the mobile station is traveling through the shadow area. Further, the present invention discloses that the satellite signal which the mobile station was

receiving prior to entering the shadow station is the same satellite signal being amplified by a receiving unit (i.e., **only** a downlink signal from the same satellite). This **only** amplified downlink signal from the satellite is transmitted though an electrically connected feeding line(s) (wherein the amplified downlink signal through the feeding line(s) **cannot** be blocked) to the radiating unit for being radiated to the mobile station as it travels in through the shadow area, wherein the radiating unit having a dual microstrip patch array antenna, wherein the dual microstrip patch array antenna is formed to output a signal from each of the first microstrip patch array antenna and the second microstrip patch array antenna in an asymmetrical or symmetrical radiation pattern, which these antennas **only** radiate the **amplified downlink signal and wherein the output signal from each of the first microstrip patch array antenna and the second microstrip patch array antenna is a duplicate signal of the amplified downlink signal which was inputted into the divider of the radiating unit** that has been amplified in the shadow area for maximizing the amplified downlink signal being received by the mobile station passing through in the shadow area. Claim 1 has been amended to better clarify these novel described aspects of the presently claimed invention, where claim 1 now recites, inter alia:

> --a symmetrical dual **downlink** transmitting antenna provided with a first microstrip patch array antenna and a second microstrip patch array antenna; and
>
> a divider having an input for attaching the first feeding line,
>
> wherein the divider divides the ~~**receive**~~ **received** and amplified downlink signal--,
>
> and
>
> --**wherein the dual microstrip patach array antenna only radiates** ~~**for only radiating**~~ the ~~**divided**~~ received and amplified downlink signal in the shadow area**, which is done** for maximizing the divided received and amplified downlink signal being received by the mobile station in the shadow area,
>
> **wherein the output signal from each of the first microstrip patch array antenna and the second microstrip patch array antenna is a duplicate signal of the amplified downlink signal which was inputted into the divider,** and
>
> wherein the radiating divided received and amplified downlink signal received by the mobile station is adjustable from any changes to the shadow area and ~~**a**~~ **any** direction the mobile station travels **in the shadow area**--.

Support for these limitations can be found at least in the specification at page 9, line 3 to page 10, line 2; page 7, lines 1-12; and FIGs. 4 and 9).

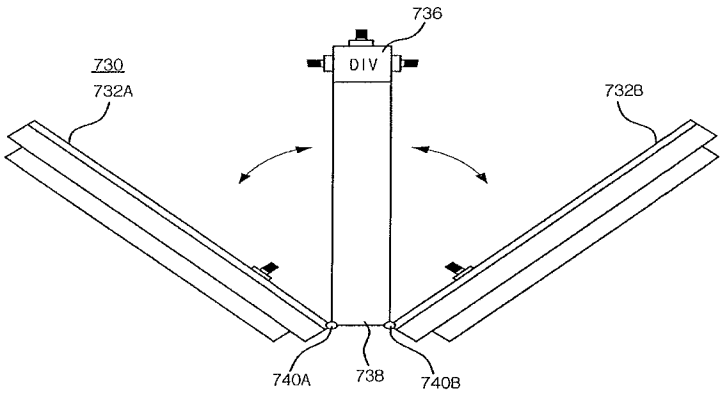
The Examiner states that Karabinis allegedly teaches dual transmitting antenna as shown in FIG. 3:210:185 and FIG. 3:290:175 and where the angle between two antennas are changed by in the mobile repeater (Karabinis FIG. 7).

However, nowhere in Karabinis teaches, discloses, or even suggests dual **downlink** transmitting antennas transmitting a same **downlink** signal, which was received and inputted to the divider where the divider divides/duplicates this same downlink signal received by the divider and then outputs the same/duplicated downlink signal to a first portion and a second portion through unblockable feed lines, and passing the first portion to the first microstrip patch array antenna and the second portion to the second microstrip patch array antenna for being radiated in a shadow area, **where the dual microstrip patch array antenna are used only as a dual downlink transmitting antennas for transmitting the duplicated downlink signal to each the dual downlink antennas for being radiated in a shadow area**.

In contrast, Karabinis **only** discloses a satellite telecommunications repeater 200 that amplifies a downlink signal 170 received at antenna 175 and retransmits the signal to at least one radiotelephone 120. The repeater 200 includes a transmitting antenna and a receiving antenna suitable for used in communicating with the satellite. That is, Karabinis does **not** disclose dual downlink transmitting antennas for transmitting a same **downlink** signal that was received by the repeater 200 from each of the antenna 175 and 185, where this same received downlink signal has been divided/duplicated and amplified to each of the dual transmitting antennas for being radiated as the downlink signal received by the repeater 200 because antenna 175 only amplifies a downlink signal from the satellite and antenna 185 is an uplink signal to the satellite from a signal received from the radiotelephone 120.

In contradistinction, FIG. 9, as shown below, of the present invention discloses dual **downlink** directional microstrip patch array antenna 730 is used **only** as a **dual downlink** transmitting antennas for transmitting a duplicates signal received from a satellite to a receiving unit, where the receiving unit feeds this received downlink signal from the satellite to the divider 736 and then having the divider transmit a

divided/duplicated downlink signal from the divider through feeding line(s) **from each the outputs of the divider to each of the respective inputs of each of the directional patch array antenna 732A and 732B for radiating the same/duplicated downlink signal** at **various angles**.



As shown above in Fig. 9, the dual directional microstrip patch array antenna 730 includes a first microstrip patch array antenna 732A, a second microstrip patch array antenna 732B, a divider 736 and a supporting member 738 provided with a pair of hinges 740A, 740B, wherein the hinges allow antenna 732A and 732B to be formed **asymmetrically or symmetrically** to the divider for radiation a received downlink signal asymmetrically or symmetrically. As a result, a downlink received signal from the receiving block through a feed line in input to the divider 736, which this amplified downlink signal is divided/duplicated by the divider 736 to generates/outputs a first downlink signal and a downlink second signal to each of **the first microstrip patch array antenna and the second microstrip patch array antenna, wherein the output signal from each of the first microstrip patch array antenna and the second microstrip patch array antenna is a duplicate signal of the amplified downlink signal which was inputted into the divider**. The first downlink signal is radiated through the first microstrip patch array antenna 732A to **a first direction** and the second downlink signal (i.e.; duplicate of the first downlink signal) is radiated through the second microstrip patch array antenna 732B to **a second direction**, which is opposite direction of the first direction and which is radiated **asymmetrically or symmetrically in relationship from the** first microstrip patch array antennas 732A when **be compared to the radiated signal from the** second microstrip patch array

antennas 732B. Accordingly, this radiation is accomplished by the first and the second microstrip patch array antennas 732A, 732B being able to be **rotatable from being** connected to the supporting member 738. Both the first and the second microstrip patch array antennas 732A, 734B are **only downlink transmitting antennas** and radiating at radiating angles of the first and the second microstrip patch array antennas 732A, 732B that are **adjustable** by tilting the first and the second microstrip patch array antennas 732A, 734B around the hinges 740A, 740B, respectively. Thus, as understood by the examiner, the presently claimed invention is completely different from Karabinis in view of Brankovic because antenna 185 is an uplink signal to the satellite and antenna is a downlink antenna (Karabinis FIG. 2). Hence how can Karabinis discloses and received downlink signal being duplicated and then this same duplicated signal being radiated asymmetrically from two antenna to a same telephone when both signal for antenna 175 and 185 are not the same and when one signal disclosed by Karabinis is received from the satellite and one signal is being transmitted to a satellite? Brankovic and/or Lindenmeier fail to cure this deficiency of Karabinis.

Also, the applicants respectfully submit that for these above reasons Brankovic nor Karabinis nor Lindenmeier, neither alone nor in combination disclose or even suggest each and every one of the limitations recited in amended 1 of the presently claimed invention, because Karabinis can not disclose receiving **only an** amplified downlink signal from the satellite for being transmitted though an electrically connected feeding line(s) (wherein **only** the amplified downlink signal through the feeding line(s) cannot be blocked) to the radiating unit, which the radiating unit radiates the received downlink signal transmitted through feeding lines from the divider as the mobile station travels in through the shadow area.

The radiating unit of the presently claimed invention discloses a dual microstrip patch array antenna, wherein the dual microstrip patch array antenna is formed to output a signal from each of the first microstrip patch array antenna and the second microstrip patch array antenna in either an asymmetrical or symmetrical radiation pattern, **wherein the output signal from each of the first microstrip patch array antenna and the second microstrip patch array antenna is a duplicate signal of the amplified downlink signal, which was inputted into the divider** such that these antennas **only**

receive and only radiate the amplified downlink signal in the shadow area for maximizing **only** the amplified downlink signal being received by the mobile station as the mobile station passes through **any direction** in the shadow area. Thus, the applicants respectfully submit that claim 1 is in condition for allowance over the examiner's cited references and especially Karabinis. Thus, the presently claimed invention is completely different from Karabinis.

Accordingly, the applicants respectfully submit that for these above reasons Karabinis not Brankovic nor Lindenmeier, neither alone nor in combination, disclose or even suggest each and every one of the limitations recited in amended 1 of the presently claimed invention, which recites --a symmetrical dual downlink transmitting antenna provided with a first microstrip patch array antenna and a second microstrip patch array antenna; and a divider having an input for attaching the first feeding line, wherein the divider divides the received and amplified downlink signal--, and --wherein the dual microstrip patach array antenna only radiates the received and amplified downlink signal in the shadow area, which is done for maximizing the divided received and amplified downlink signal being received by the mobile station in the shadow area, wherein the output signal from each of the first microstrip patch array antenna and the second microstrip patch array antenna is a duplicate signal of the amplified downlink signal which was inputted into the divider, and wherein the radiating divided received and amplified downlink signal received by the mobile station is adjustable from any changes to the shadow area and any direction the mobile station travels in the shadow area--, because Karabinis can **not** adjust radiating angles of the first and the second microstrip patch array antennas **by tilting two downlink transmitting antennas at various angles, which the tilting two downlink transmitting antenna receives the same downlink signal that has been divided/duplicated and amplified, respectively for being radiated to a same radiotelephone**. Thus, the applicants respectfully submit that claim 1 is in condition for allowance over the cited references and especially Karabinis.

As to claims 2-4, 6-7, and 9-10, the applicants respectfully submit that these claims are allowable at least since they depend from claim 1, which is now considered to be in

condition for allowance for the reasons above.

Conclusion

For the reasons set forth above, the applicants respectfully submit that claims 1-4, 6-7 and 9-10, now pending in this application, are in condition for allowance over the cited references. Accordingly, the applicants respectfully request reconsideration and withdrawal of the outstanding rejections and earnestly solicit an indication of allowable subject matter.

This amendment is considered to be responsive to all points raised in the office action. The examiner is encouraged to contact the undersigned attorney by telephone to expeditiously resolve any remaining questions or concerns.

Respectfully submitted,

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